


202502UECM3463OE1a

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Review of preview

Started on	Friday, 7 March 2025, 10:30 AM
Completed on	Friday, 7 March 2025, 10:30 AM
Time taken	10 secs
Grade	0 out of a maximum of 10 (0%)

1
Marks: 1


A random variable has a mean of 6 and coefficient of variation of 12. The third raw moment is 1640. Determine the skewness. _____

Answer:

[Make comment or override grade](#)

Incorrect
Correct answer: -0.246185

Marks for this submission: 0/1.

2
Marks: 1

Claim severity has the following distribution:

Claim Size	150.0	157.5	165.0	172.5	180.0
Probability	0.31	0.29	0.27	0.09	0.04


Determine the distribution's Skewness. _____

Answer:

[Make comment or override grade](#)

Incorrect
Correct answer: 0.570963

Marks for this submission: 0/1.

3
Marks: 1

Claim sizes expressed in Ringgit Malaysia(RM) follow a pareto distribution with parameters $\alpha = 4$ and $\theta = 2,550$. A euro is worth 4.5 RM. Calculate the probability that a claim will be worth 970.0 euros or more. _____

Answer:

[Make comment or override grade](#)

Incorrect
Correct answer: 0.018492

Marks for this submission: 0/1.

4
Marks: 1

An insurance loss is being modeled as a continuous two-spliced distribution as follows:

$f_X(x)$

$= c_1 e^{-x/300}, 0 < x < 300$

$= c_2 e^{-x/3600}, x \geq 300$

Calculate the average loss. _____

Answer:



[Make comment or override grade](#)

Incorrect
Correct answer: 3374.226054

Marks for this submission: 0/1.

5

Marks: 1

For insurance coverage, you are given that claim size, X , follows a gamma distribution with parameters $\alpha = 3$, $\theta = 910$. Determine $V(X \wedge 1,850)$. _____

Answer:



[Make comment or override grade](#)

Incorrect
Correct answer: 143247.29

Marks for this submission: 0/1.

6

Marks: 1

X is a random variable representing loss size. You are given that

$$E[X \wedge d] = d - 2.6z\Phi(zd^{-1/2}) - 2.6y \exp(2/2.6)\Phi(-yd^{-1/2}), \quad z = (d - 2.6)/2.6, \quad y = (d + 2.6)/2.6.$$

Loss sizes are affected by 15% inflation. Determine the average payment per loss under a policy with 13 ordinary deductible after inflation. _____

Answer:



[Make comment or override grade](#)

Incorrect
Correct answer: 0.691451

Marks for this submission: 0/1.

7

Marks: 1

You are given the following:

- Losses follow a Weibull distribution with parameters $\theta = 20$ and $\tau = 2$.
- The insurance coverage has an ordinary deductible of 12.

If the insurer makes a payment, what is the probability that an insurer's payment is less than or equal to 34. _____

Answer:



[Make comment or override grade](#)

Incorrect
Correct answer: 0.992773

Marks for this submission: 0/1.

8

Marks: 1

Let X be a discrete random variable with probability generating function

$$P_X(z) = 0.37z^{230} + 0.24z^{690} + 0.22z^{1150} + 0.14z^{1610} + 0.03z^{2070}$$

Calculate the mean excess loss, $e(1,250)$. _____

Answer:



[Make comment or override grade](#)

Incorrect
Correct answer: 441.18

Marks for this submission: 0/1.

9

Marks: 1

Suppose $X \sim N(\mu = 170, \sigma^2 = 1,156)$, calculate $E[(X - 102)_+]$. _____

Answer:




[Make comment or override grade](#)

Incorrect
Correct answer: 68.29

Marks for this submission: 0/1.

10



Marks: 1

A loss, X , follows a Pareto distribution with $\alpha = 5$ and unspecified parameter θ . You are given:

$$E[X - 916|X > 916] = 2E[X-103|X > 103].$$

Calculate $E[X - 2,480|X > 2,480]$. _____

Answer:

[Make comment or override grade](#)

Incorrect

Correct answer: 797.5

Marks for this submission: 0/1.